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Responsive to the Written Opinion dated July 5, 2005.

Attached hereto is a new claim wording with claims 4 and 5 slightly editorially amended and claims 1 to 3, and 6 left unchanged.

With respect to the clarity objections raised in the Written Opinion the following should be pointed out.

Claim 1 shall not be limited to a frequency converter of a generator of a wind energy turbine. Accordingly, the expression "in particular" makes sense.

In the Written Opinion, claims 2 and 3 are subjected as missing lower and upper limits. Applicants kindly disagree therewith. In claims 2 and 3 specific percentage values of grid voltage decreasing are mentioned. These values relate to the normal grid voltage value and, accordingly, are

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clearly defined. Accordingly, lower and upper limits are not necessary in order to understand the scope of these claims.

In new claim 4, the expressions "the time interval" and "crossover" are replaced by "a time interval" and "intersection", respectively.

In new claim 5 the article "the" prior to "pulse width interval" is replaced by the article "a". Applicants disagree with the interpretation given in the Written Opinion with regard to an alleged unclarity of claim 5 with regard to the wording "interval". Since no other time interval is specified, the pulse width together with another not specified time interval cannot be meant by the wording "interval".

Moreover, in the above-mentioned Written Opinion original claim 1 is objected due to an alleged lack of inventive step. Applicants kindly disagree therewith due to the following reasons.

In the Written Opinion it is argued that the subject matter of claim 1 differs from the prior art e.g. according to D1 in that claim 1 defines the following method steps of:

- reducing an output voltage of the DC link circuit for increasing an output current of the DC/AC converter and/or
- reducing the operation frequency of electronic switches of the DC/AS converter for increasing the output current of the DC/AS converter.

However, as further stated in the Written Opinion, these method steps shall be obvious for a person skilled in the art in the light of the further disclosure of D1 as well as the combination of D1 and D2, or D1 and D3. Applicants also disagree herewith due to the following reasons.

The system of D1 comprises an energy storing means xM (see Fig. 10) which is part of the grid. Accordingly, the grid takes care for compensation of any voltage

drops or grid voltage overloads. In contrast thereto, according to the invention the additional energy, namely the additional current, is generated in the frequency converter of the generator as such. These two concepts are totally different and cannot be mixed up. Accordingly, the method steps as mentioned above cannot be obvious for a person skilled in the art when reading D1.

With regard to the further argumentation in the Written Opinion, namely that the subject matter of the application does not involve an inventive step in the light of the combination of D1 and D2, or D1 and D3, Applicants would like to point out that both D2 and D3 are dealing with energy saving aspects in electric drives or motors. However, the subject matter of the application is not directed to saving energy but to generate additional energy for supporting the grid in case of an overload when additional current is required. Therefore, D2 and D3 cannot give an artisan any hints to control the frequency converter as mentioned above as well as in claim 1 in order to support the grip.

The International Preliminary Examining Authority is kindly requested to reconsider the above-mentioned Written Opinion and to basically confirm patentability of the subject matter of the application.

(Hilleringmann)
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Encl.

CLAIMS

1. Method for operating a frequency converter of a generator in particular of a wind energy turbine, in the event of a substantial grid voltage drop, wherein the frequency converter (10) comprises an AC/DC converter (20), to be connected to the generator (14), a DC/AC converter (22) to be connected to the voltage grid (18), and a DC link circuit (24) for connecting the AC/DC converter (20) to the DC/AC converter (22), the method comprising the step of
   - reducing an output voltage of the DC link circuit (24) for increasing an output current of the DC/AC converter (22) and/or
   - reducing the operation frequency of electronic switches (28) of the DC/AC converter (22) for increasing the output current of the DC/AC converter (22).

2. Method according to claim 1, wherein the reducing step or at least one of the reducing steps is performed when, for a few seconds, the grid voltage is decreased up to at least about 10 % of its normal value and wherein the reducing step of at least one of the reducing steps is terminated when, for a few seconds, the normal grid voltage is increased again up to at least about 80 % of its normal value.

3. Method according to claim 1, wherein the reducing step or at least one of the reducing steps is performed when, for a few seconds, the grid voltage is decreased up to at least about 20 % of its normal value and wherein the reducing step of at least one of the reducing steps is terminated when, for a few seconds, the normal grid voltage is increased again up to at least about 90 % of its normal value.

4. Method according to any one of claims 1 to 3, wherein the step of reducing the output voltage of the DC link circuit (24) comprises controlling a time interval between a intersection of the output voltage of a phase of the generator (14) and an operation of an electronic switch (25) of the AC/DC converter (20).

5. Method according to any one of claims 1 to 3, wherein the step of reducing the output voltage of the DC link circuit (24) comprises reducing a pulse width interval of the electronic switch (25) of the AC/DC converter (20).

6. Method according to any one of claims 1 to 5, wherein the reduction of the output voltage of the DC link circuit (24) and/or the reduction of the operational frequency of the DC/AC converter (22) is/are performed such that an increased current flows without a substantial change of the energy losses in the electronic switches (28) of the DC/AC converter (22).